

The LVE chemical is a “tracer” chemical used to monitor and measure the movement of oil or gas in deep oil/gas bearing geological strata or detect leaks in refinery process systems. The information obtained is used to maximize production efficiency by enabling treatment design or adjustment of pumping rates to flow characteristics of a particular strata from which oil and gas are recovered or diagnose process vessel problems in order that they can be repaired in a suitable manner.

The LVE chemical is purchased on an as-needed basis to supply a particular job or set of jobs. Minimal stocks are held in inventory for future use. The LVE chemical, a liquid substance, is purchased in up to 10 kg sealed aluminum containers and transported to Tracerco. Each job requires a maximum of 2 kg.

Tracerco transfers the liquid into a small screw cap container ready for use on a specific project.

Each container is opened at the point of use. “Use” involves pumping the LVE chemical into apparatus at the wellhead that is used by the customer / operator to inject fluids into deep oil / gas bearing strata to help encourage flow of oil and gas to the point of extraction.

A single Tracerco employee of the LVE submitter **or suitably trained third party representative** uses a special pump they have transported to the well head for this purpose. They begin by pouring a quantity of water into the pump reservoir. They then pump some of the water into the injection apparatus under pressure and perform a “leak test” to assure that they have achieved a tight seal between the pump and the injection apparatus. They then pour the required amount of LVE substance into the pump reservoir, which still contains water. After emptying the LVE substance container, the employee rinses it with water which they pour into the pump reservoir. The employee then pumps the LVE substance into the injection apparatus. The Tracerco employee continues pumping until the reservoir is empty. The empty (and rinsed) container that held the LVE substance is discarded into the solid waste management system in use at the work site. The employee takes the pump away from site.

For a period of time thereafter, an employee of the customer or a single Tracerco employee of the LVE submitter will sample recovered oil or gas from the system treated with the LVE substance. Target concentrations for the LVE substance is 1 ppb w/v to 20 ppb w/v in the hydrocarbon phase.